Protecting women and children from second hand tobacco smoke; A public health priority

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Second hand tobacco smoke (SHS) is a mixture of exhaled and side stream smoke released from a burning cigarette or other forms of tobacco such as shisha, cigar, pipe, bidi, etc. SHS contains 4,000 chemicals, 70 of which can cause cancer. Children and non-smoking adults exposed to SHS end up inhaling carcinogens and other toxic components that are present in it. SHS exposure is a serious health hazard to non-smokers, leading to an estimated 890,000 deaths and a loss of 10·9 million disability-adjusted life years (DALYs) globally every year.[1]

Women and children are worst affected by SHS exposure: 28% of deaths from SHS exposure occur in children.[2] SHS exposure impairs children's lung development and causes immune dysregulation; therefore, increasing their risk of acquiring lower respiratory tract infections,[3] tuberculosis, and incident cases, recurrent episodes, and exacerbations of asthma.[4] Parental smoking is also associated with an increased risk of their children's admissions to hospital.[3] Moreover, SHS exposure in children and adolescents leads to poor cognitive functions and academic achievements.[5] Children living in smoking households are at high risk of becoming adult smokers later.[6] SHS exposure during pregnancy is a key and avoidable risk to foetal development and contributes to adverse perinatal and postnatal outcomes, often with a lasting and negative impact during infancy and beyond.

Unfortunately, 40% of children are exposed to SHS worldwide amounting to a major public health threat.[2] Situation is worse in low- and middle-income countries where almost 56% children could be exposed to SHS.[8] This is in stark contrast to figures from the UK and Canada where only a minority of children are now exposed to such risks. Smoking is now less visible in public places, and most children and non-smoking adults are living in smoke-free environments. Consequently, hospital admissions due to chest infections and heart diseases have come down too.

The south and south-east Asia region has the highest burden of disease attributable to SHS in the world. According to the Global Tobacco Surveillance System data and Demographic Health Surveys, the majority of women and children living in Bangladesh and Pakistan are exposed to SHS.[9] In 2014 in Pakistan, approximately 86% of people using restaurant and 76% using public transportation might have been exposed to SHS.[10] Nearly half of all adolescents (13-15 years old) in Pakistan could be exposed to SHS.8 In a recent survey in 12 schools in Dhaka, Bangladesh, we found that 95% of 9-11 year old children had salivary cotinine levels consistent with recent exposure to SHS.[11] In addition to public places, children are also exposed to SHS in their private homes and cars. The prevalence of daily SHS exposure during pregnancy was found greater than active tobacco use in pregnancy across many low- and middle-income countries ranging from 6% (95% CI 5% to 7%) (Nigeria) to 73% (95% CI 62% to 81%) (Armenia).[9] In Pakistan, nearly 40% of pregnant women get exposed to SHS on a daily basis.[9]

If the above survey findings are a true reflection of the picture for most low- and middle-income countries including Pakistan, quite clearly, current measures are failing to protect the vast majority of women and children from SHS and the risks it poses. This level of exposure may well be contributing towards poor health and development of children in these countries

Smoking in indoor public spaces and workplaces is now banned in many countries, including Bangladesh and Pakistan. Where comprehensive and enforced, these bans have resulted in a significant reduction in SHS exposure and associated morbidity and mortality.[12] However, compliance to the smoke-free legislation is problematic in countries like Pakistan.1 Smoking on public transport and in the workplace is still commonplace, and there is no restriction on smoking in the home. There is also little evidence on

the effectiveness of non-legislative interventions to protect women and children from SHS exposure.

Implementing smoke-free laws should remain a priority to curb exposure for non-smokers in low- and middle-income countries, including policies to promote smoke-free environments in multi-unit housing, in vehicles and in open public spaces such as children's play areas. Public awareness campaigns are also needed to raise awareness about the harms of SHS exposure in women and children. In low- and middle-income countries, nongovernmental organisations should support a grassroots movement to change smoking norms in communities.

An important first step would be to recognise that protecting women and children from exposure to SHS is key to improving maternal and child health. Healthcare professionals working with pregnant women and children should be aware of these issues and be proactive in offering advice and support to women and children who are exposed to SHS.

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